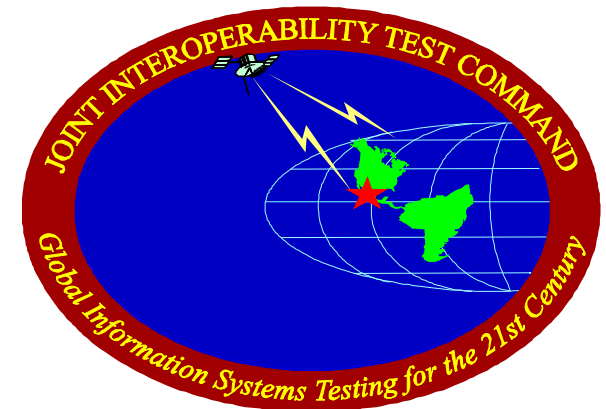### NEIL POINTS OF CONTACT

Mr. John Gese
JITC (JTEB)
Building 57305
Fort Huachuca, AZ 85613-7020
Phone: (520) 538-5164/DSN: 879-5164
FAX: (520) 538-4347/DSN 879-4347
e-mail: gesej@fhu.disa.mil

Captain Gordon Bradley
(Canadian Exchange Officer)
JITC (JTEB)
Building 57305
Fort Huachuca, AZ 85613-7020
Phone: (520) 533-8575/DSN: 821-8575
FAX: (520) 538-4347/DSN 879-4347
e-mail: bradleyg@fhu.disa.mil

NETWORK ENGINEERING & INTEGRATION LABORATORY (NEIL)

Joint Interoperability Test Command

Joint Interoperability Test Command
ATTN: Visitor Support Center
Building 57305
Fort Huachuca, AZ 85613-7020

1-800-LET-JITC
http://jitc.fhu.disa.mil

Support for the Warfighter....Anytime....Anyplace

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INTRODUCTION

Within the Department of Defense (DOD), the Joint Interoperability Test Command (JITC) has been given the responsibility of certifying that all Command, Control, Communications, Computers and Intelligence (C4I) Systems are interoperable. To conduct interoperability certifications on DOD's C4I systems, the JITC maintains a number of test laboratories, each with a specialized functional area.

The Network Engineering and Integration Laboratory's (NEIL) specialized functional area is testing of the Defense Information Systems Network (DISN). The DISN comprises the Defense Switched Network (DSN), Defense Red Switch Network (DRSN), Unclassified-but-Sensitive Internet Protocol Router Network (NIPRNET), Secret Internet Protocol Router Network (SIPRNET), Joint Worldwide Intelligence Communications System (JWICS) and Video Teleconferencing (VTC) Network. To complete its testing, the NEIL is also capable of connecting to the other JITC Laboratories and other commercial facilities.

NEIL TESTING

The NEIL conducts interoperability, conformance, and certification testing of the DISN in response to requests from DOD, other Government Agencies and equipment vendors. To conduct DISN interoperability testing the JITC has duplicated existing DISN components and systems.

TESTING OVERVIEW

The test capabilities of the NEIL include:

Equipment Interoperability

- DISN Transport/Edge Switches
    - FORE Systems ASX 200BX
- FORE Systems ASX 1100/1200
- NORTEL Passport Switches
- IDNX/Promina
- DACS II
- Various multiplexers
- DSN Switches/Devices
    - EWSD
    - MSL-100
    - KNS-4100
    - STP
- SIPRNET/NIPRNET/JWICS
    - Cisco 7500 series routers
- VTC
    - Madge
    - Picturetel

- DRSN
    - SDS Family
    - DSS Family

Test Procedures

The following are a representation of current procedures conducted in the NEIL:

- DISN Transport
    - T1, T3, E1 and SONET
    - ATM
- DSN
    - Alarms/MLPP
    - Bit Error Rate Testing
    - Call Capacity/Quality
    - Switched 56
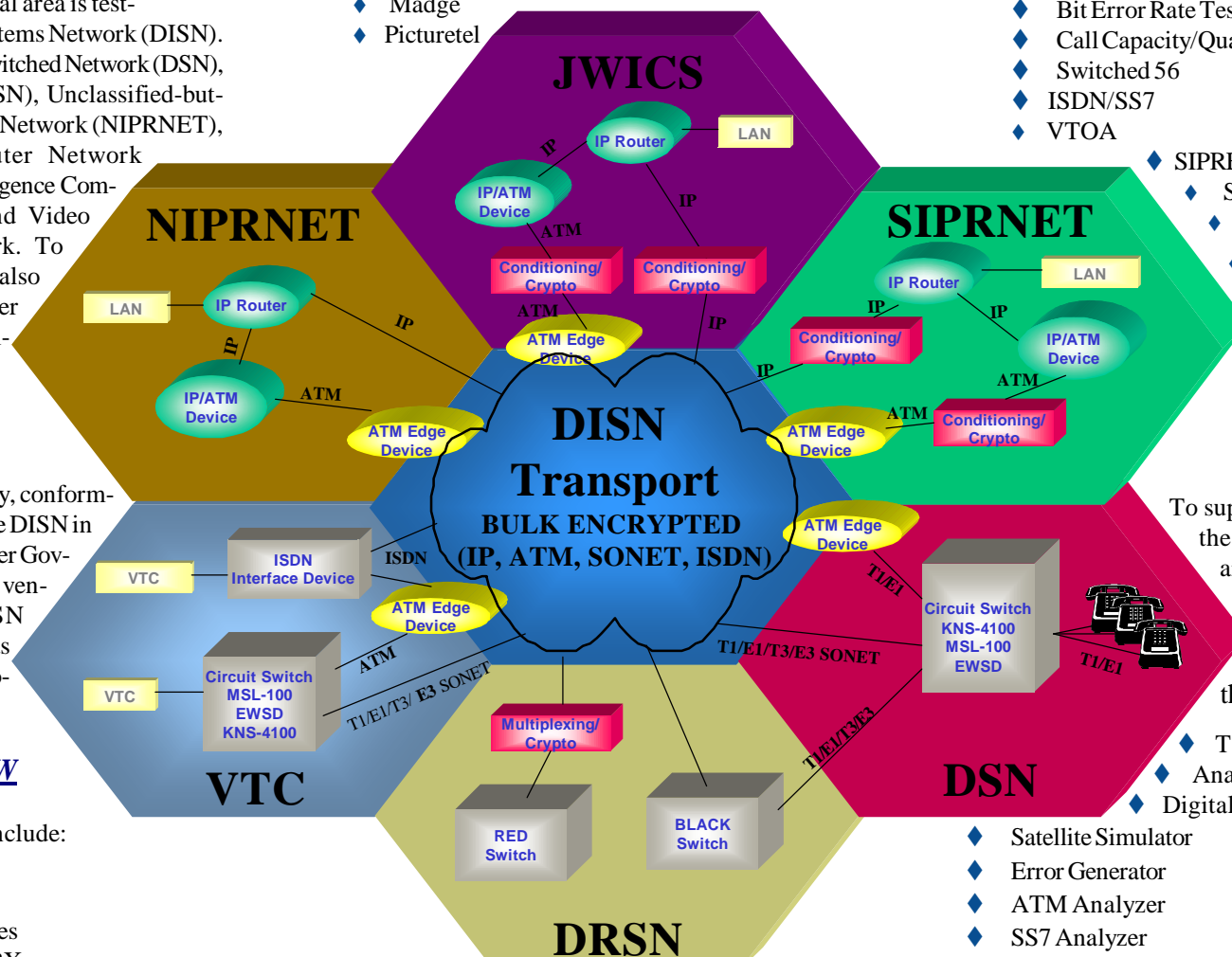   - ISDN/SS7
    - VTOA
- SIPRENET/NIPRNET/JWICS
    - Standards compliance
    - Performance
    - VTC
        - ISDN/Switched 56/ATM
        - DRSN
        - DSN Interoperability

ADDITIONAL TEST RESOURCES

To support the test environment, the NEIL is equipped with an array of stand-alone test, measurement and diagnostic equipment (TMDE). The following is a list of some of the NEIL TMDE capabilities:

- T1/E1 Analyzers
- Analog Call Loaders
- Digital Call Loaders
- Satellite Simulator
- Error Generator
- ATM Analyzer
- SS7 Analyzer
- ISDN BRI/PRI Analyzer

NEIL Test Capabilities

JWICS
IP Router — LAN
IP/ATM Device
Conditioning/Crypto
Conditioning/Crypto
ATM Edge Device

NIPRNET
LAN — IP Router
IP/ATM Device
ATM Edge Device

SIPRNET
IP Router — LAN
Conditioning/Crypto
IP/ATM Device
ATM Edge Device
Conditioning/Crypto

DISN Transport
BULK ENCRYPTED
(IP, ATM, SONET, ISDN)
ATM Edge Device

VTC
VTC
ISDN Interface Device
ATM Edge Device
VTC
Circuit Switch MSL-100 EWSD KNS-4100

DSN
Circuit Switch KNS-4100 MSL-100 EWSD
T1/E1

DRSN
Multiplexing/Crypto
RED Switch
BLACK Switch

T1/E1/T3/E3 SONET
T1/E1/T3/E3